# SLIDE CURVE AVALANCHE BARRIERS - Dk 3.0 N 3.2

## NOTES

GENERAL

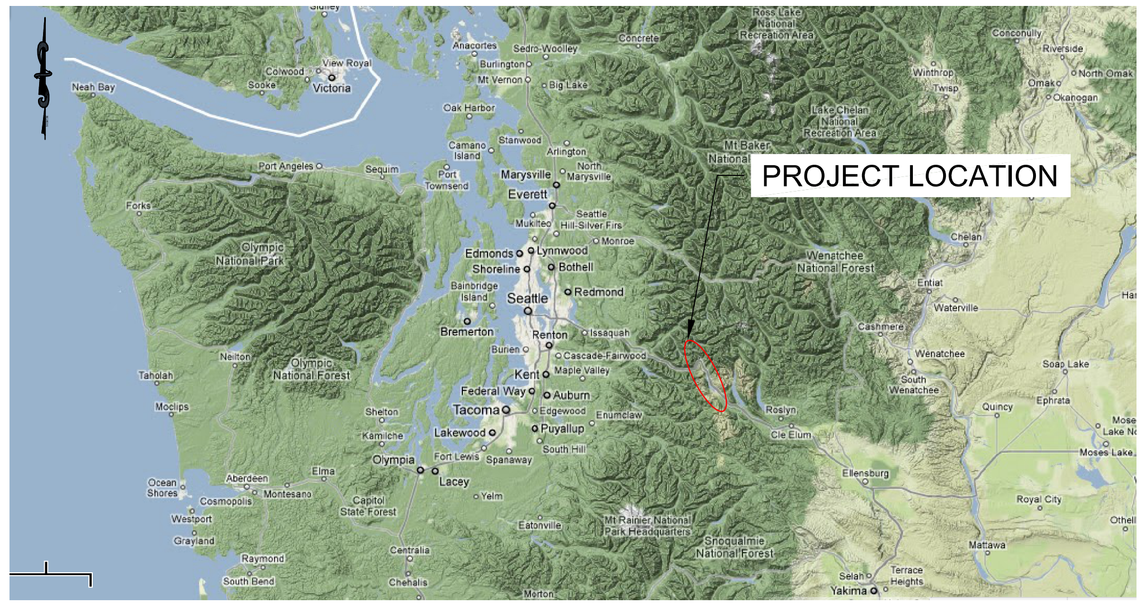
1. DETAILS SHOWN ON THE DRAWINGS ARE TYPICAL AND SIMILAR. DIMENSIONS, SCHEDULES, SPECIFIC NOTES, AND DETAILS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
2. THE POSITIONING OF THE LINES SHOWN IN THE TOPOGRAPHIC LAYOUT IS AS FAR AS POSSIBLE TO ACCURATE; HOWEVER IN PHASE OF STAKING OUT THE FOUNDATIONS ON THE SLOPE, THERE MAY BE POSSIBLE ADJUSTMENTS OF ALTITUDE AND LENGTH OF LINES TO ADAPT TO THE ACTUAL CONDITIONS OF THE GROUND W/O ENTAILING A VARIATION OF THE TOTAL QUANTITIES PROVIDED IN THE PROJECT.
3. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, DIMENSIONS, ELEVATIONS, AND UTILITIES PRIOR TO FABRICATION AND INSTALLATION.
4. CONTRACTOR SHALL VERIFY ALL ANCHOR LOCATIONS PRIOR TO CONSTRUCTION.
5. ALL STRUT FOUNDATION TYPES AND LOCATIONS TO BE FIELD FITTED AND VERIFIED BY KANE GEOTECH ENGINEER OF RECORD.

INSTALLATION

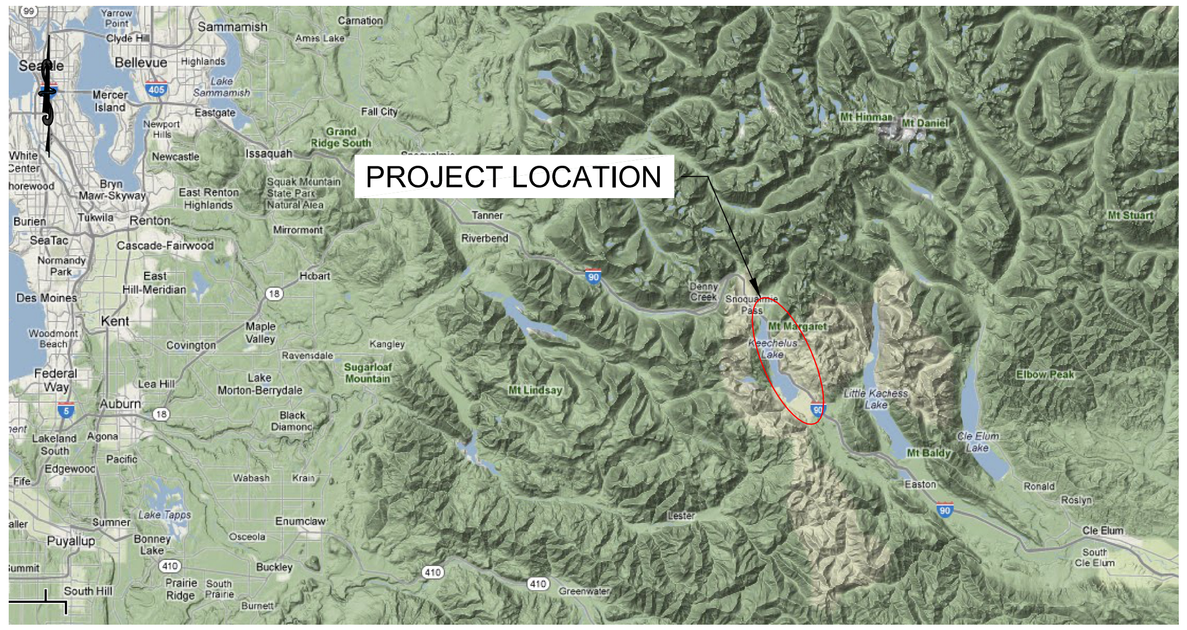
1. ANCHOR DEPTHS SHOWN ON PLANS ARE MINIMUM AND BASED ON PROJECT SPECIFICATIONS. ACTUAL ANCHOR DEPTHS AS REQUIRED TO OBTAIN MINIMUM ANCHOR PULLOUT STRENGTH ARE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL INSTALLATION TO BE DONE IN ACCORDANCE WITH RELATED PRODUCT MANUAL(S).
3. DIMENSIONS SHOWN ON PLANS ARE BASED ON INFORMATION PROVIDED TO KANE GEOTECH, INC. AND MAY NOT BE INDICATIVE OF FIELD CONDITIONS.

REFERENCES


1. MACCAFERRI (2006). "O.M. SNOW NETS $D_k$ = 2.5-4.0 N = 2.5-3.2 Ψ = 45° $f_c$ = 1.1".
2. SWISS FEDERAL INSTITUTE FOR SNOW AND AVALANCHE RESEARCH (2007). "DEFENSE STRUCTURES IN AVALANCHE STARTING ZONES: TECHNICAL GUIDELINE AS AN AID IN ENFORCEMENT".
3. URS CORPORATION & ARTHUR I MEARS, PE. INC. (DEC 2007). "I-90 SNOQUALMIE PASS EAST PROJECT AVALANCHE MITIGATION REPORT: AVALANCHE ANALYSES". SUBMITTED TO WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.
4. URS CORPORATION & ARTHUR I MEARS, PE. INC. (JULY 2010). "I-90 SNOQUALMIE PASS EAST PROJECT SNOW NET AVALANCHE MITIGATION: FINAL DESIGN RECOMMENDATION". SUBMITTED TO WASHINGTON STATE DEPARTMENT OF TRANSPORTATION.
5. 
6. WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (2010). "CONTRACT PLANS: SNOWSHED TO KEECHELUS DAM PHASE 1C- REPLACE SNOWSHED AND ADD LANES; VOLUMES 1-8".
7. WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (2010). "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION".
8. WASHINGOTN STATE DEPARTMENT OF TRANSPORTATION (2011). "CONTRACT PROVISIONS FOR CONSTRUCTION OF: I-90 SNOWSHED TO KEECHELUS DAM PHASE 1C- REPLACE SNOWSHED AND ADD LANES; VOLUMES 1-5".


L-1 / 1 PROJECT LOCATION
SCALE: N.T.S.




L-2 / 1 VICINITY PROJECT LOCATION
SCALE: N.T.S.

NOTE:
AVALANCHES ARE SPORADIC AND UNPREDICTABLE. CAUSES RANGE FROM HUMAN CONSTRUCTION TO ENVIRONMENTAL EFFECTS (WEATHER, EARTHQUAKES, ETC.). BECAUSE OF THE MULTIPLICITY OF FACTORS AFFECTING AVALANCHE DYNAMICS, AVALANCHES ARE NOT, AND CANNOT BE, AN EXACT SCIENCE THAT GUARANTEES THE SAFETY OF INDIVIDUALS AND PROPERTY. HOWEVER, BY THE APPLICATION OF SOUND ENGINEERING PRINCIPLES TO A PREDICTABLE RANGE OF AVALANCHE DYNAMICS, THE RISK OF INJURY AND PROPERTY LOSS CAN BE SUBSTANTIALLY REDUCED USING PROPERLY DESIGNED AVALANCHE PROTECTION SYSTEMS IN IDENTIFIED RISK AREAS. INSPECTION AND MAINTENANCE OF AVALANCHE PROTECTION SYSTEMS IS NECESSARY TO INSURE THAT THE DESIRED PROTECTION LEVEL IS NOT DEGRADED BY IMPACT DAMAGE, CORROSION, OR OTHER FACTORS.

# WSDOT AVALANCHE BARRIER
## MACCAFERRI SNOW NET SYSTEM
## KITTITAS, WASHINGTON

SCHEDULE — SHEET NUMBER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TOPOGRAPHIC LAYOUT: SLIDE CURVE....2
TOPOGRAPHIC LAYOUT: Dk 3.0 N 3.2 LINES....3
Dk 3.0 N 3.2 GRADING AND EXCAVATION OPTIONS....4
Dk 3.0 N 3.2 FOUNDATION TYPE 1 & TYPE 2 DETAILS....5
Dk 3.0 N 3.2 TUBULAR STRUT BASE PLATE DETAILS....6
Dk 3.0 N 3.2 TUBULAR STRUT DETAILS....7
Dk 3.0 N 3.2 THREAD BAR CENTRALIZER DETAILS....8
Dk 3.0 N 3.2 WIRE ROPE ANCHOR DETAILS....9
Dk 3.0 N 3.2 WIRE ROPE ANCHOR SPECIFICATIONS....10
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Dk 3.0 N 3.2 ELEVATION AND PLAN VIEW DETAILS....12
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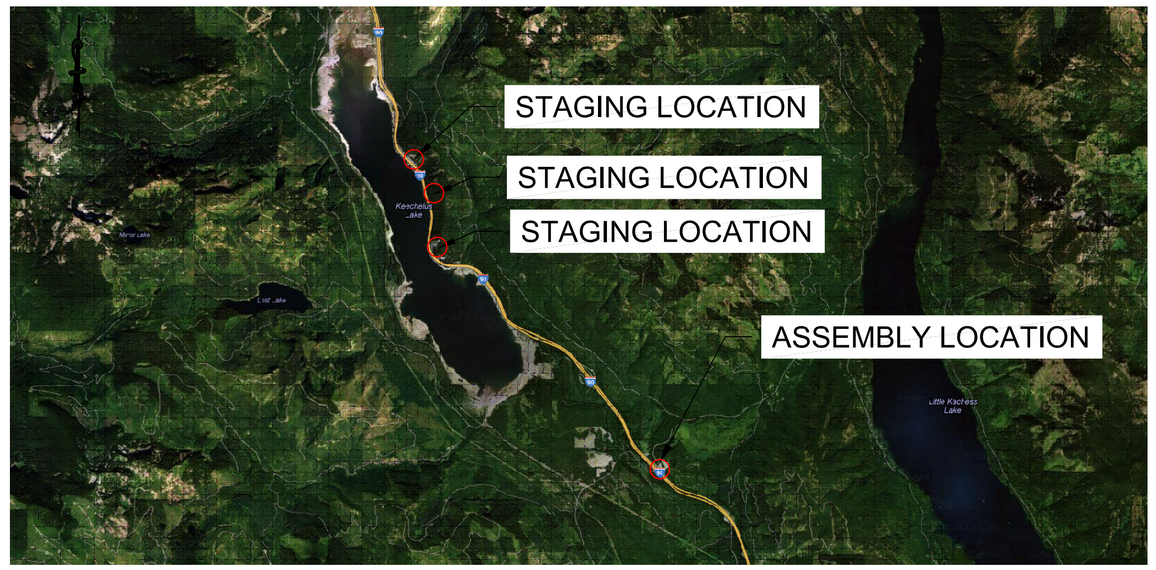


L-3 / 1 STAGING & ASSEMBLY LOCATION
SCALE: N.T.S.

WASHINGTON DEPARTMENT OF TRANSPORTATION C8127 - KITTITAS SNOWSHED TO KEECHELUS DAM PHASE 1C

Dk 3.0 N 3.2 INDEX SHEET

REVISED

WSDOT Avalanche Barrier
Maccaferri Snow Net Barrier
Kittitas, Washington

PREPARED AT THE REQUEST OF
HI-TECH Rockfall Construction
PO Box 674
Forest Grove, Oregon 97116


KANE GeoTech, Inc.
Geoengineering Consultants
7400 Shoreline Drive, Suite 6
Stockton, California 95219
www.kanegeotech.com
Tel: 209-472-1822
Fax: 209-472-0802


WILLIAM P. KANE — WASHINGTON — 45579 — REGISTERED PROFESSIONAL ENGINEER

SHEET 1 OF 13

DRAWN: JAM/BJF
CHECKED: WFK
JOB NO: GT11-26
SCALE: AS SHOWN
DATE: 2013 05-30
DESIGN: WFK